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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/055,282

01/22/2002

Jonathan E. Roth

2001-0575

7539

76863

7590

12/21/2009

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EXAMINER

RAMIREZ, JOHN FERNANDO

ART UNIT

PAPER NUMBER

3737

NOTIFICATION DATE

DELIVERY MODE

12/21/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mary@kkpatent.com
ptomail@kkpatent.com

Office Action Summary	Application No. 10/055,282	Applicant(s) ROTH ET AL.	
	Examiner JOHN F. RAMIREZ	Art Unit 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 9-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-8, 38-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/22/09 has been entered.

Response to Amendment

Applicant's arguments filed 10/22/09 have been fully considered but they are not persuasive.

The amendment dated 10/22/09, has amended claims 1, 38 and 40-42 by inserting the limitations from claim 6 "where the reference arm is absent addressable polarization selecting components". However, such amendment to the claims has raised new issues. Applicant's amendment to the specifications dated 01/28/09 does raise a new issue, since the original file specification describes that Fiber polarization adjustors paddles 14a, 15a may be used in both sample and reference arms 14 and 15.

Additionally, the omission of an element and its function in a combination, where the remaining elements perform the same functions as before, involves only routine skill in the art. *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975); *In re Karlson*, 311 F.2d 581, 136 USPQ 184 (CCPA 1963). (See 37 CFR 1.116 and 41.33(a)).

Based on the above observations, the rejection is maintained and repeated below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 38 and 40-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant's amendment to the specifications dated 01/28/09 does raise a new issue, since the original file specification describes that Fiber polarization adjustors paddles 14a, 15a may be used in both sample and reference arms 14 and 15.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 38 and 40-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant's amendment to the specifications dated 01/28/09 does raise a new issue, since the original file specification describes that Fiber polarization adjustors paddles 14a, 15a may be used in both sample and reference arms 14 and 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 00/69333 in view of non-patent literature de Boer Johannes of record.

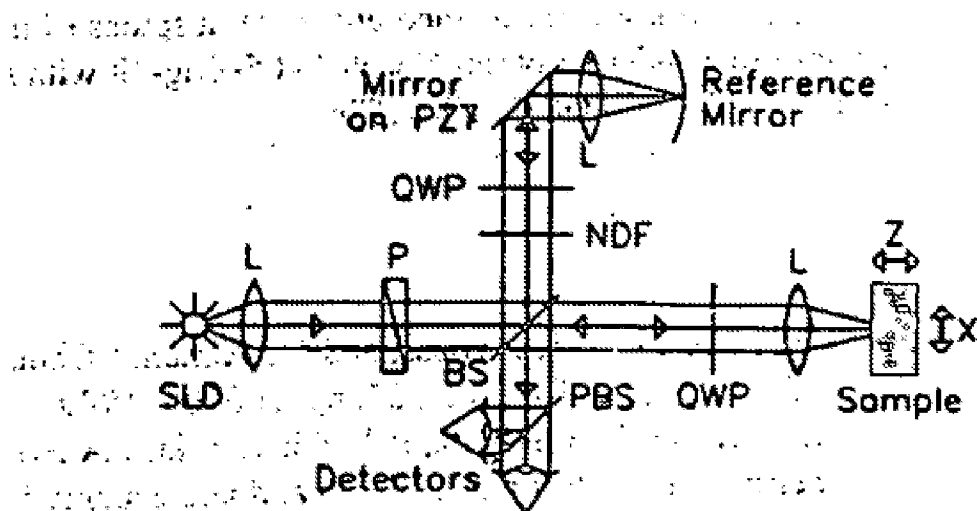


Fig. 1. Schematic of the PS-OCT system. SLD: superluminescent diode. L: Lens. P: Polarizer. BS: Beam splitter. QWP: Quarter-wave plate. NDF: Neutral density filter. PBS: Polarizing beam splitter. PZT: Piezoelectric transducer. 2-D images were formed by lateral movement of the sample at constant velocity (x -direction), repeated after each longitudinal displacement (z -direction).

The WO 00/69333 discloses an OCDR/OCT system having polarization sensitivity, comprising a reference arm providing a delay line for electromagnetic energy, a sample arm providing a path for incident electromagnetic energy having

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prescribed polarization characteristics to a sample, a detector arranged to detect electromagnetic energy from the delay line and from the sample, wherein the electromagnetic energy is light, a beamsplitter directing light from a source to the reference arm and to the sample arm and for combining light from the reference and sample arms to direct the combined light to the detector, wherein the sample arm includes a polarizer and a polarization adjusting device, wherein the polarizer comprises a linear polarizer and the polarization adjusting device comprises an adjustable waveplate, wherein the reference arm is absent polarization adjusting components, further wherein the detector comprises a photosensitive detector, a lock-in device and a computer for analyzing signals detected by the detector, and further comprising a drive for determining the polarization states of incident electromagnetic energy directed to the sample and detected by the detector. (see Figures 2 and 3, pages 9 line 25 thru page 14 line 30). The WO 00/69333 reference appears not to disclose that the polarizer is in the sample arm and that the light remitted from the sample according to the series of polarization states is measured and comprises measuring birefringence.

However in the same field of endeavor, de Boer Johannes teaches the use of a PS-OCT interferometer system in Fig. 1 that illustrates the use of a polarizer in the sample arm of the system and the polarization state in each arm of the interferometer was computed. In the sample arm, the polarization changes were determined by the sample birefringence (see Abstract, sections II, and III).

Based on the above observations, for a person of ordinary skill in the art, modifying the device of the WO 00/69333 reference with a polarizer located in the

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sample arm of an PS-OCT system to calculate the polarization state changes determined by birefringence as taught by de Boer Johannes, would have been obvious in view of the conventionality of these enhancements.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN F. RAMIREZ whose telephone number is (571)272-8685. The examiner can normally be reached on (Mon-Fri) 7:00 - 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRIAN CASLER/
Supervisory Patent Examiner, Art
Unit 3737

/J. F. R./

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